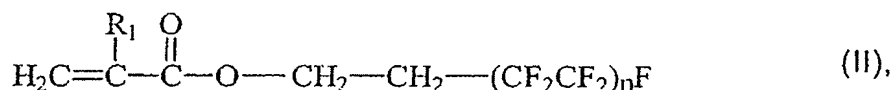


Enclosure with the letter of 8 December 2004 to the European
Patent Office, Rijswijk, concerning International Patent
Application No. PCT/EP 03/11546 (our J020 Rec'd PCT/PTO 1 6 JUN 2005

- 30 -

Claims

1. Coating composition for producing formable
scratchproof coatings with dirt repellency effect,
comprising
A) from 1 to 30% by weight of a prepolymer
obtainable by free-radically polymerizing a
mixture comprising
A1) from 1 to 10 parts by weight of at least
one sulphur compound containing at least
3 thiol groups and
A2) from 90 to 99 parts by weight of alkyl
(meth)acrylates,
B) from 0.2 to 10% by weight of fluoroalkyl
(meth)acrylate according to the formula (II)



wherein the radical R₁ is a hydrogen atom or a
methyl radical and n is an integer in the
range from 2 to 10

- C) from 20 to 80% by weight of polyfunctional
(meth)acrylates,
D) from 0.01 to 10% by weight of at least one
initiator,
E) from 2 to 75% by weight of at least one
diluent and
F) from 0 to 40% by weight of customary
additives.

2. Coating composition according to Claim 1, charac-
terized in that the prepolymer A) has a viscosity
number to DIN ISO 1628-6 in the range from 8 to
15 ml/g measured in CHCl₃ at 20°C.

3. Coating composition according to Claim 1 or 2,
characterized in that the alkyl (meth)acrylates
used to prepare the prepolymer A) have 1 to 8
5 carbon atoms in the alcohol residue.
4. Coating composition according to Claim 3,
characterized in that the prepolymer A) is pre-
pared using a mixture of alkyl (meth)acrylates A2)
10 containing at least 10% by weight of methyl
(meth)methacrylate and/or ethyl (meth)acrylate and
at least 2% by weight of alkyl (meth)acrylates
having 3 to 8 carbon atoms.
- 15 5. Coating composition according to one of the pre-
ceding claims, characterized in that the sulphur
compound contains at least four thiol groups.
- 20 6. Coating composition according to Claim 5, charac-
terized in that the sulphur compound is
pentaerythritol tetrathioglycolate.
- 25 7. Coating composition according to one of the
preceding claims, characterized in that the
coating composition contains from 0.5 to 2% by
weight of fluoroalkyl (meth)acrylates in accor-
dance with component B).
- 30 8. Coating composition according to one of the
preceding claims, characterized in that the
initiator in accordance with component D) is a UV
initiator.
- 35 9. Coating composition according to one of the
preceding claims, characterized in that the

diluent in accordance with component E) comprises
(meth)acrylates having 1 to 10 carbon atoms,
styrenes and/or acrylonitrile.

- 5 10. Coating composition according to one of the
preceding claims, characterized in that component
F) comprises UV absorbers and/or UV stabilizers.
- 10 11. Scratchproof formable dirt-repellent moulding
comprising a polymeric substrate and a scratch-
proof coating obtainable by a coating composition
according to one of Claims 1 to 10.
- 15 12. Moulding according to Claim 11, characterized in
that the polymeric substrate comprises polymethyl
methacrylate, polycarbonate, polyvinyl chloride,
polystyrene, polyolefins, cycloolefin copolymers,
polyesters and/or acrylonitrile/butadiene/styrene
copolymers.
- 20 13. Moulding according to Claim 11 or 12, charac-
terized in that the moulding has an impact
strength to ISO 179/1 of at least 10 kJ/m².
- 25 14. Moulding according to one of Claims 11 to 13,
characterized in that the polymeric substrate has
a thickness in the range from 1 mm to 200 mm.
- 30 15. Moulding according to one of Claims 11 to 14,
characterized in that the scratchproof coating has
a coat thickness in the range from 1 to 50 µm.
- 35 16. Moulding according to one of Claims 11 to 15,
characterized in that the haze of the moulding
increases by not more than 5% after a scratch

resistance test to DIN 52 347.

17. Moulding according to one of Claims 11 to 16,
characterized in that the polymeric substrate has
5 an elasticity modulus to ISO 527-2 of at least
1500 MPa.
18. Moulding according to one of Claims 11 to 17,
characterized in that the moulding has a
10 weathering stability to DIN 53 387 of at least
4000 hours.
19. Moulding according to one of Claims 11 to 18,
characterized in that the moulding has a trans-
15 parency to DIN 5033 of at least 70%.
20. Moulding according to one of Claims 11 to 19,
characterized in that the contact angle of alpha-
bromonaphthalene with the surface of the polymeric
20 article at 20°C is at least 50°.
21. Process for producing scratchproof formable dirt-
repellent mouldings according to one of Claims 11
to 20, characterized in that a coating composition
25 according to one of Claims 1 to 10 is applied to a
polymeric substrate and cured.